

# ABSTRACT

A disk for a hard disk drive. The disk includes a S1 layer of magnetic material located over a substrate, and a layer of ruthenium located over the S1 layer. The disk further includes a top layer of magnetic material and a layer of chromium located adjacent to the top magnetic layer. The chromium diffuses into the top layer of magnetic material to magnetically decouple the grains of the magnetic material. Decoupling the grains of the magnetic material reduces the magnetic noise of the disk and improves the signal to noise ratio of the hard disk drive.